

Consumer Project on Technology  
P.O. Box 19367, Washington, DC 20036  
(202) 387-8030; <http://www.essential.org/cpt>

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

April 12, 1996

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William Caton, Acting Secretary  
Federal Communications Commission  
1919 M Street, NW  
Washington, DC 20554

Dear Secretary Caton:

Please accept the following copies of our comments on the Federal Universal Service Notice Of Proposed Rulemaking And Order Establishing Joint Board (CC Docket No. 96-45; FCC 96-93). Attached is an original and fourteen additional copies of our submission which have been included for your internal distribution. Thank you for your assistance.

Sincerely,

  
James Love

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

COMMENTS ON FEDERAL  
UNIVERSAL SERVICE  
NOTICE OF PROPOSED RULEMAKING  
AND ORDER ESTABLISHING  
JOINT BOARD

CC Docket No. 96-45FCC 96-93

To: Chief, Common Carrier Bureau

**COMMENTS OF THE CONSUMER PROJECT ON TECHNOLOGY ON THE  
FEDERAL UNIVERSAL SERVICE NOTICE OF PROPOSED RULEMAKING  
AND ORDER ESTABLISHING JOINT BOARD**

**A. Introduction**

1. The Consumer Project on Technology is a non-profit organization which was started by Ralph Nader to promote the consumer interest in matters concerning the development of new technologies, including information technologies. For additional information about CPT see our Web page at <http://www.essential.org/cpt>. These comments address three issues. The need to eliminate the Carrier Common Line (CCL) per-minute fee on long distance calls, and to move away from usage based contributions to finance the fixed costs of the network. Second, we discuss alternatives to usage based charges. Finally, we emphasize the importance of using the telephone network for digital connections to a wide area network, and we discuss the problem of excessive prices for residential ISDN service.

**B. The per-minute Carrier Common Line (CCL) charge should be eliminated, and regulators should reexamine the structure of all usage based pricing of long distance service.**

2. In paragraphs 112, 113, 114 and 115, the Commission has invited comments on the per-minute Carrier Common Line (CCL) charge, which supports the cost of the "local loop" telephone network. Under the CCL, a per-minute usage fee for making a long distance telephone call is "paid" by the long distance carriers (LDC) to the local exchange carrier (LEC). These payments from the LDC to the LEC reduce the monthly fixed fee for telephone service, but only at the expense of higher long distance charges.

3. Assuming that overall, the change will be *revenue neutral*, in that the additional total revenue collected by the LECs from new fees will be equal to the revenue lost from the elimination of the CCL, there will be a redistribution of the cost of maintaining the local loop. If the revenue from the CCL is replaced by a higher Subscriber Line Charge (SLCs), which is a fixed monthly fee, then

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persons who make very few long distance calls will pay more, and persons who call more will pay less. This is inevitable for any revenue neutral movement away from a usage based fee, because consumers do not have identical calling patterns. There are, of course, other alternatives that could be considered as substitutes for the CCL, each of which would represent a different redistribution of the cost of maintaining the local loop. However, whatever the approach, we believe that the elimination of the per-minute CCL charge is a necessary action, in order to move toward a more efficient system of pricing access to the network, and that consumers will benefit greatly from the elimination of the CCL.

4. As of August 1, 1995, the average per minute CCL charges were about 1.72 cents per conversation minute, and equaled roughly 30 percent of 5.7 cents per minute for "premium" service that the LECs charged the LDCs [*Statistics of Communications Common Carriers*, Table 5.11]. Some persons estimate that the elimination of the CCL will lead to a \$2.50 increase in the fixed monthly SLC fee. Some consumer groups have expressed opposition to the elimination of the CCL per-minute fees, if it is replaced with an increase in the fixed monthly fee, because persons who make few long distance calls would be worse off, including some low income consumers who might be deterred from having telephone service. While we share concerns about access to the network by the poor, we do not believe that it is necessary to maintain a system of charging by the minute for access to the network. The Commission has many alternative methods to reduce the costs of network access for poor persons which do not involve charging per-minute fees for network usage. (These will be discussed below.)

5. We believe the elimination of the per-minute CCL fee is a very important first step toward a more general restructuring of the regulatory regime, which will encourage more intensive and efficient use of the network. We believe it is appropriate to reconsider any mechanisms which base contributions to support fixed local loop costs on per-minute or per call charges. We believe it is necessary to provide alternative pricing schemes which make it possible to consider different methods of pricing long distance services, or other new uses of the local loop, such as the types of services that can be delivered over ISDN and other digital connections to the home.

6. The local loop telephone network is characterized by large fixed costs. The elements of the network which are sensitive to the amount of network use are increasingly inexpensive to build out, as the costs of interoffice trunkage has become cheaper, and digital switches are deployed. Moreover, "costs" imposed by usage of the local loop network are largely sensitive to when usage occurs, with congestion occurring during the peak hours between 8 a.m. and 5 p.m.

7. The long distance telephone market is also a high fixed cost technology. Moreover, the LDCs appear to have considerable excess capacity. According to recent reports, when Sprint enjoyed only about 10 percent of the long distance market, it had enough capacity to carry all long distance traffic by itself. The total industry wide capacity for long distance service far exceeds demand. [see the discussion from Viscusi, Vernon and Harrington, *Economics of Regulation and Antitrust*, MIT, 1995, page 495]. Long distance services provided through the public switched network are overpriced and underutilized, particularly during off-peak hours.

8. User charges based upon hefty per-minute fees cause consumers to economize on their use of the network. This is inefficient when the user charges exceed the costs which are imposed on the network. We believe the CCL and other per minute charges for access to the local loop do greatly exceed the marginal costs of usage. Moreover, the LECs are actively lobbying state regulatory

commissions to support a variety of other usage based tariffs, based upon per call or per-minute fees. For example, Bell Atlantic, Nynex, PacBell, US West, Ameritech (Indiana) and GTE are among companies seeking fees of 2 to 6 cents per minute or more for local calls made on an ISDN line. These fees are an attempt by the LECs to appropriate a portion of the value that consumers perceive from higher speed access to the Internet. As a consequence of the high residential ISDN tariffs, there has been very little progress toward the conversion of the local loop to an end-to-end digital network.

9. The Internet provides an interesting contrast to the pricing model for the local loop and the regulated distance telephony network. Firms and non-profit organizations which provide Internet service acquire carrier services through a variety of channels, including both tariffed and untariffed telecommunications services, often leased from the large LECs and LDCs. The providers costs of obtaining carrier services and the retail prices for Internet connectivity are highly varied. The most common arrangement for a provider is to buy dedicated (or shared) leased lines, which provide a certain amount of bandwidth. Prices for these lines typically depend upon capacity, rather than usage. At the retail level, consumers have a wide variety of options, including services which are priced by hour of usage, prices for blocks of usage, or flat rate plans. The per-hour charges typically range from \$3 to \$1 per hour for usage, depending upon the provider or the number of hours of service. The flat rate plans are very popular. Indeed, AT&T and MCI both recently announced Internet access for \$19.95 per month, for unlimited usage.

10. People who use the Internet are often astonished at how cheap Internet access is, when compared to the regulated long distance telephone market. It is possible to use the Internet for a wide variety of applications, including the delivery of voice, video and new types of multimedia presentations, as well as the less bandwidth intensive services such as electronic mail or Web browsing.

11. One area where the Internet suffers is congestion, which slows the network down and degrades the performance of some applications. Internet congestion occurs in time periods which are apparently less predictable than for the regulated telephone network. There are various proposals about how to address the congestion problems. One suggestion is to create a mechanism to charge prices for priority routing when congestion exists, while allowing non-priority or non-congested traffic to remain unmetered. This has not proved to be a simple mechanism to design or administer on the Internet. There is also work on methods of defining certain levels of service that would support applications that require higher performance levels, which is of interest to those who hope that the Internet can evolve into a platform to deliver video and other multimedia products to and from homes. What is impressive about these various Internet initiatives is the diversity and ingenuity of approaches. There has been little enthusiasm for the idea that a simple per-minute, per-connection, per-message or per-byte charge should be imposed on users, for a variety of reasons. These charges would result in too little traffic in periods with no network congestion, and the administrative task of measuring usage and collecting (and redistributing) fees is assumed to be costly and complex.

12. The current controversies over ISDN pricing present many of the same issues. Several LECs are seeking to impose very high fees for ISDN deployment. As noted earlier, Bell Atlantic, Nynex, PacBell, US West, Ameritech (Indiana) and GTE are trying to impose hefty per-minute charges for making a local call over an ISDN line. Several of these LECs claim that they are simply trying to recover the costs of more intensive use of the network, which requires greater inter-office

trunkage and switching capacity. None of the independent cost studies support the high fees the LECs are seeking to charge, even for nailed up connections. This is an extremely important issue, because it goes to the issue of whether or not the copper wire local loop will be used to provide digital connections to wide area networks.

13. Several persons from the computer and software industry have offered suggestions about how the LECs could reconfigure network software to accommodate more intensive use of the copper wire local loop infrastructure. Intel has told state regulators that the LECs could design an ISDN connection so that consumers could open a "D" channel connection, and have the software dynamically open up "B" channels for data transfers on an as needed basis. Since the D channel is already an open connection, this would allow households to maintain permanent connections, but not tie up interoffice bandwidth. We very much support movements in this direction. Another approach, recommended by David Lesher, is that the LECs offer "connectivity," at the central office, which would be a digital data service, which would be routed to various Internet Service Providers in the most efficient way. These innovative approaches to addressing potential congestion problems contrast with the lack of creativity by incumbent telephony giants, who seem exclusively interested in using the issue of potential congestion as an excuse to tax value-added information products.

14. The per-call charges that several states are imposing for the local loop create their own problems. With ISDN or other digital technologies, one might consider a situation where the "telephone calling" is controlled by the computer, and the computer frequently connects and unconnects to various information sources to obtain or send information. With very high per-call charges, this becomes too expensive. At the extreme end, users simply nail-up connections, to avoid high per call charges. Some Bell Atlantic business consumers who face a 9.5 cents per-call charge, nail up connections for hours for this reason. If the copper wire is to be used for digital services, both the call and the per-minute charges present many distortions and problems.

15. If the Commission is to assert jurisdiction over the Internet, as has been requested by some telephone companies, then it will be presented with enormous problems in determining how to measure usage. If one connects to a Web page out of the local calling area, what is the measure for the usage? The minutes looking at the page? The minutes (seconds) transferring the data? What happens when the network is slow, due to congestion? Will this lead to excessive costs in trying to mirror sites in order to avoid the usage charges? Will this create a barrier to information for persons in rural areas?

16. If the Commission imposes per-minute, per-connection, or per-byte usage charges on the Internet, these charges would likely eliminate much of the free publishing which now takes place on the Internet. The existence of vast free sources of information on the Internet is an extremely important issue for universal service. It is one thing to provide a device which can connect to a network, and another thing to be able to use the network. Poor and the middle income consumers both benefit from have access to information services. Universal service goals are served by policies which facilitate access to the publishing products and other services which have flourished on the Internet, often for free. Usage based charges would substantially reduce the scope and availability of information resources which are now available for free on the Internet.

17. The existence of the Internet as a platform for non-commercial publishing and communications is important, even for those persons who do not directly use the Internet, since

many persons are served indirectly by the Internet. For example, Essential Information uses the Internet to provide a number of low income grass roots community groups with access to banking statistics and other data which is used to investigate problems of discriminatory lending practices. While few individual members of the group may have daily access to the Internet, their neighborhood association uses the Internet for research purposes, and to communicate with other neighborhood groups and national experts. Low income students often benefit when their teachers use the Internet to gather information for courses. There are countless such examples. These are very important activities that would suffer if the Commission imposed the CCL per-minute charges on Internet communications, or imposed other mandatory usage based contributions to the local loop.

#### Methods of Supporting Local Loop Costs and Universal Service Fund

18. While we oppose the CCL, and recommend that the Commission generally move away from mandatory per-minute or per call fees for network service, we encourage the Commission to consider a variety of ways to enhance network access by poor persons. In doing so, however, the Commission should consider more than the cost of have a device in the home. Poor persons, like everyone else, need to use the network.

19. Table one presents data on the average cost of residential telephone bills, by quintile.

**Table 1**  
**How do Phone Bills Differ by Income?**

Income Quintile	Average Monthly Bill*	Toll & Discretionary*	Percent of Average Monthly Bill
Poorest	43.70	25.00	57%
2nd	48.40	29.70	61%
3rd	53.40	34.70	64%
4th	57.10	38.40	67%
Richest	70.70	52.00	74%
White \$ Other	54.40	35.80	66%
Black	64.00	45.30	71%

\* For 1992.

Source: SRCI

20. It is important to observe that the poorest consumers spend 57 percent of their average monthly telephone bill for toll and discretionary services.. For blacks, the percent is 71 percent. Focusing only on the cost of the device ignores the way that people actually use the network today.

21. We also expect that rich and poor consumers will benefit from the next generation of information products and services, which require much longer connections to the network, and more intensive usage. If per-minute or per-byte type charges are imposed, then the network will be

taxing value added services, and making many "free" value added products and services too costly for persons who cannot pay the carrier charges. If usage truly drove costs in a linear fashion this would not be a problem, but there is clearly a highly non-linear relationship between network use and network costs. Linear usage pricing schemes will lead to extremely inefficient network usage, and they will also create a pay-as-you go environment which will present unneeded barriers to information services by poor consumers, who are least able to pay usage fees. Many new information services will then be mostly available to higher income consumers, creating further divisions between the rich and the poor.

22. The Commission has identified a number of different mechanisms for collecting revenues to support the universal service fund (USF), and these mechanism are not unlike those which are feasible for supporting the local loop. We oppose mechanisms which would base contributions on minutes of network use, number of calls, or bytes of information which are transmitted. These are all attempts to measure the consumer willingness to pay, or value they place on the network service. Unfortunately, these mechanisms are very imperfect measures of even this, and cause very important barriers for the deployment of new digital technologies, not to mention the inefficiencies from imposing linear time-insensitive pricing schemes on a network with time-sensitive and non-linear costs.

23. If the Commission is seeking a contribution toward joint fixed costs or the USF which are based upon the value of the network services that are consumed, then it should consider contributions which are tied to the dollar value of services which are purchased, rather than proxies such as minutes, calls or bytes. Contributions based upon the dollar value of services would be less harmful to efficient network usage than the per-minute, per-byte or per call charges.

24. Another possible approach would be to charge long distance telephone companies a fixed fee for each customer, or fraction of customer, they serve. In a world where consumers use a single carrier for long distance telephone calls, this is relatively straightforward. In a world with multiple carriers for consumers, this is a more complex, but not impossible undertaking. The fixed fees, sometimes referred to as line charges, should be based upon the capacity for service, not the actual usage. This would encourage greater use of the fixed cost network.

### **C. The importance of using the telephone network for digital connections to a wide area network.**

25. The public telephone network is an enormously valuable infrastructure which is vastly underutilized. The most glaring example of this under utilization is the appalling pricing policies by many LECs for residential ISDN service. For example, while Bell Atlantic sell business voice ISDN service at \$38 per month, plus 9.5 cents per ball, it charges residential consumers from 2 to 4 cents per minute to use an ISDN for a 128 Kbps data connection. U.S. West charges 6 cents per minute or more for residential ISDN service. PacBell, Nynex, Ameritech (for Indiana) and GTE also rates on very high per minute charges. These fees prevent anyone but the wealthiest consumers from using digital technologies, like ISDN, for fast "last mile" connections to the Internet or other services.

26. The pricing of ISDN is extremely important, because ISDN provides the only here-and-now technology for providing most persons with end-to-end digital network connections. Cable modem

are promising, but will not be deployed everywhere, due to limited cable network infrastructures in many markets. The copper wire network is the only feasible platform to provide ubiquitous digital network connections for many years. Regulators should not permit the LECs to hold back the future by pricing ISDN or other digital services too high, or by failures to reengineer the network in ways that are needed today.

27. With even a moderately fast digital platform, many new competitive information services will be developed, as well as many important non-commercial information services. Tele-medicine, distance learning and other important applications need more bandwidth into the home. It is a national disgrace that residential users are still buying analog modems, when ISDN technology has been sitting on the shelf for years.

28. The LECs complain that if they allow consumers to have access to ISDN technology they will face congestion problems. There is no evidence to date that ISDN users have caused any congestion use. However, even more important is the failure of the LECs to move toward simple modifications of network software that would solve most potential congestion problems before they occur.

29. Intel and other computer and software experts are urging the LECs to reengineer network software so that ISDN users could maintain open connections over the already open D channels, and dynamically and instantly open B channels on a as-needed-basis for data transfers. Under this system, an open connection would transmit low bandwidth data, such as electronic mail or signaling information, over the D channel, which causes no congestion over the current infrastructure, the interoffice trunkage would easily accommodate huge numbers of full time connections. It is painfully obvious that this is the direction in which the network needs to ~~move~~ migrate.

30. Several independent studies suggest that the costs of upgrading POTS lines are less than \$4 per month. It is outrageous that the LECs are permitted to charge consumers several multiples of this for an ISDN connection. We agree with Bill Gates of Microsoft that it is extremely important to bring down ISDN pricing, and we agree with Microsoft and Intel that residential ISDN service should be priced much closer to POTS.

April 12, 1996

Sincerely,



James Love  
Director

Consumer Project on Technology

<http://www.essential.org/cpt>

voice: 202/387-8030; fax 202/234-5176